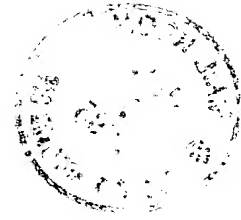


## Vectors For Tissue-Specific Replication



### *Abstract*

5 The invention generally relates to targeted gene therapy using recombinant vectors and particularly adenovirus vectors. The invention specifically relates to replication-conditional vectors and methods for using them. Such vectors are able to selectively replicate in a target tissue to provide a therapeutic benefit from the presence of the vector *per se* or from heterologous gene products expressed from the vector and distributed throughout the tissue. In such vectors, a gene essential for replication is placed under the control of a heterologous tissue-specific transcriptional regulatory sequence. Thus, replication is conditioned on the presence of a factor(s) that induces transcription or the absence of a factor(s) that inhibits transcription of the gene by means of the transcriptional regulatory sequence with this vector; therefore, a target tissue can be selectively treated. The invention also relates to methods of using the vectors to screen a tissue for the presence or absence of transcriptional regulatory functions that permit vector replication by means of the transcriptional regulatory sequence.

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